

Notice of Allowability

Application No.

09/955,458

Examiner

Terry L. Englund

Applicant(s)

KWAK ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt (Nov 23, 2005) and Interviews (Jan 26 & 30, 2006).
2. ☒ The allowed claim(s) is/are 1,3,6,8-11,13-16, and 18-19 (now renumbered as 1, 3-13, and 2, respectively for printing purposes).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 01302006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the applicant's representative Richard D. Ratchford Jr. (Reg. No. 53,865) on Jan 30, 2006.

The application has been amended as follows:

Claim 16, line 19: added --as the control voltage-- after "enable voltage".

The change was made to clearly relate the "enable voltage" (i.e. lines 19 and 20) with the "control voltage" (i.e. lines 15 and 26). Without this change, it would appear the two phrases would be referring to separate, distinct voltages, and would thus be confusing.

RESPONSE TO AMENDMENT

The amendment submitted on Nov 23, 2005 was reviewed and considered with the following results:

Amended claims 8, 10, 16, and 18 overcame the rejections of claims 8-11, 16, and 18 under 35 U.S.C. 112 as described on page 3 of the previous Office Action. Although those rejections were withdrawn, the amended changes within claim 16 created a new concern with respect to how "an enable voltage" (i.e. line 19) and the "control voltage" (e.g. see line 15) relate to one another. This concern was addressed/corrected by the Examiner's Amendment described above, wherein the applicant's representative was initially contacted on Jan 26, 2006 to discuss

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the phrasing, and final approval for the examiner's suggested change was granted on Jan 30, 2006.

Amended claims 1, 6, 8, 10, 13, and 15 overcame the rejections of: 1) claims 1, 3, 6, 8-11, and 13-15 under 35 U.S.C. 103(a), with respect to Viehmann/Kokubo et al.; and 2) 1, 3, 6, 8-11, and 13-16 under 35 U.S.C. 103(a), with respect to Taguchi/Kokubo et al., as described in the previous Office Action. All of those prior art rejections have now been withdrawn because none of these references clearly shows or discloses the gate of the (third) PMOS transistor being connected to the drain of the first PMOS (or MOS) transistor as now recited within independent claims 1, 6 (upon which claims 8, 10, 13, and 15 depend), and 16.

Therefore, there is no known objection or rejection remaining within the present application.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

None of the prior art references reviewed and considered shows or discloses a reference voltage generating circuit, comprising an active resistance part/device/circuit and a voltage supply circuit, as recited within independent claims 1, 6, and 16, respectively. More specifically, none of the references clearly shows or discloses a reference voltage generating circuit having: 1) a gate of the third PMOS transistor (within the voltage supply circuit) being connected to the drain of the first PMOS transistor (within a current mirror circuit) as now recited within independent claim 1 (upon which claims 3 and 19 depend), wherein the voltage supply circuit supplies the enable voltage to the plurality of MOS transistors within the active resistance part; 2) the gate of the PMOS transistor (within the voltage supply circuit) being connected to the

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drain of the first PMOS transistor (formed on the first current path) as now recited within independent claim 6 (upon which claims 8-11, and 13-15 depend), wherein the active resistance device is supplied with an enable voltage from the voltage supply circuit; and 3) the gate of the PMOS transistor (within the voltage supply circuit) being connected to the drain of the first MOS transistor (within the current mirror circuit) as now recited within independent claim 16 (upon which claim 18 depends), wherein the voltage supply circuit supplies the enable/control voltage to the fifth MOS transistor of the active resistance circuit. Since there is no motivation to modify or combine any prior art reference(s) to ensure the specific relationships described above are met, with respect to the active resistance part/device/circuit and the voltage supply circuit's PMOS transistor, the claims are deemed patentably distinct over the prior art of record.

Claims 1, 3, 6, 8-11, 13-16, and 18-19 are allowed, and have been renumbered as 1, 3-13, and 2, respectively for printing purposes. The renumbering takes into account the cancellation of claims 2, 4-5, 7, 12, and 17, and regroups related claims together (e.g. newly added claim 19 depends on claim 1).

Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terry L. Englund

30 January 2006